

TECH OFFER

Effective and Green Antifungal Antimicrobial Agent for Perishable Foods and Beverages



KEY INFORMATION

TECHNOLOGY CATEGORY:

Foods - Quality & Safety

Foods - Ingredients

Foods - Packaging & Storage

Life Sciences - Industrial Biotech Methods & Processes

TECHNOLOGY READINESS LEVEL (TRL): **TRL4**

COUNTRY: **ISRAEL**

ID NUMBER: **TO174779**

OVERVIEW

Perishable foods are food products that have a very short shelf life. Maximising the shelf life of these food products through food preservations would help to reduce food wastage and strengthening the global food system. Food preservation techniques include thermal, electrical, chemical and radiation methods. Currently, antifungal microbial agents are mainly synthetic chemicals and the effectiveness often depend on the nature of the food, its pH and moisture content.

The technology offer is an ingredient in the form of protein powder or liquid that can be formulated into different applications based on the functional needs. A few examples of finished product would be a food additive for plant-based meat alternatives, a post-harvest coating or an active packaging to reduce food loss of fresh fruits and vegetables material.

The technology provider is seeking R&D collaboration and IP licensing opportunities with partners who are interested to further

develop this technology.

TECHNOLOGY FEATURES & SPECIFICATIONS

The compound is a recombinant protein produced from microbes via precision fermentation. The novel mechanism is effective and efficient in extending the shelf life of perishable food and beverage products.

The technology presents the following features:

- Food-safe and nature-based compounds
- Cutting edge technology to inhibit fungi decay and pathogens
- Environmentally friendly
- Non-toxic & digestible
- Biodegradable
- Effective in low concentration and imparts no off-colour taste

POTENTIAL APPLICATIONS

This solution applies cutting edge science to improve shelf life of perishable foods for growers, manufacturers, and retailers.

Potential applications include (but are not limited to):

- Fresh Fruits and vegetables
- Meat and poultry products
- Plant-based Meat & Dairy Alternatives
- Beverages
- Dairy products
- Cultivated meat (both as production aid to inhibit contaminations in culture and as preservative in finished goods)

Additional applications in adjacent markets would be Cosmetics and Pharma.

UNIQUE VALUE PROPOSITION

- Food-Safe and Protein-based Antimicrobial Ingredient
- Can be easily integrated into many food types (both fresh and processed food)
- More adaptable to process conditions in terms of solubility, broad pH range and temperature range i.e. pasteurisation
- Suitable for many food types, can be applied on food surface or in food formulations
- Non-toxic and digestible
- Bio-degradable and environmentally friendly